

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5501428

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
SHAHIN MEHDIZAD TALEIE	01/07/2019
ASHOK SWAMINATHAN	03/06/2019
SUDHARSAN KANAGARAJ	04/24/2019
NEGAR RASHIDI	03/06/2019
SIYU YANG	01/07/2019
BEHNAM SEDIGHI	01/07/2019
HONGHAO JI	03/06/2019
JASWINDER SINGH	01/08/2019
ANDREW WEIL	01/08/2019
DONGWON SEO	03/06/2019
XILIN LIU	01/07/2019
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	QUALCOMM INCORPORATED
<b>Street Address:</b>	5775 MOREHOUSE DRIVE
<b>City:</b>	SAN DIEGO
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	92121-1714
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16138499
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(770)804-0900
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
<b>Phone:</b>	770-709-0080
<b>Email:</b>	qualcomm_docket@srtslaw.com
<b>Correspondent Name:</b>	SMITH TEMPEL BLAHA LLC/QUALCOMM DOCKETIN
<b>Address Line 1:</b>	50 GLENLAKE PARKWAY
<b>Address Line 2:</b>	SUITE 340
<b>Address Line 4:</b>	ATLANTA, GEORGIA 30328

PATENT

<b>ATTORNEY DOCKET NUMBER:</b>	17006.0553U1
<b>NAME OF SUBMITTER:</b>	MICHAEL J. TEMPEL
<b>SIGNATURE:</b>	/Michael J. Tempel/
<b>DATE SIGNED:</b>	05/01/2019

**Total Attachments: 20**

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**ASSIGNMENT**

WHEREAS, WE,

1. **Shahin MEHDIZAD TALEIE**, a citizen of the **United States of America**, having a mailing address located at **5775 Morehouse Drive, San Diego, California, 92121-1714**, and a resident of **San Diego, California**,
2. **Ashok SWAMINATHAN**, a citizen of **Canada**, having a mailing address located at **5775 Morehouse Drive, San Diego, California, 92121-1714**, and a resident of **Cardiff, California**,
3. **Sudharsan KANAGARAJ**, a citizen of **India**, having a mailing address located at **1201 Parkmoor Ave. #3324, San Jose, California 95126**, and a resident of **San Jose, California**,
4. **Negar RASHIDI**, a citizen of **Iran**, having a mailing address located at **5775 Morehouse Drive, San Diego, California, 92121-1714**, and a resident of **Irvine, California**,
5. **Siyu YANG**, a citizen of the **People's Republic of China**, having a mailing address located at **5775 Morehouse Drive, San Diego, California, 92121-1714**, and a resident of **San Diego, California**,
6. **Behnam SEDIGHI**, a citizen of **Iran**, having a mailing address located at **5775 Morehouse Drive, San Diego, California, 92121-1714**, and a resident of **La Jolla, California**,
7. **Honghao JI**, a citizen of the **People's Republic of China**, having a mailing address located at **5775 Morehouse Drive, San Diego, California, 92121-1714**, and a resident of **San Diego, California**,
8. **Jaswinder SINGH**, a citizen of the **United States of America**, having a mailing address located at **5775 Morehouse Drive, San Diego, California, 92121-1714**, and a resident of **San Diego, California**,
9. **Andrew WEIL**, a citizen of the **United States of America**, having a mailing address located at **5775 Morehouse Drive, San Diego, California, 92121-1714**, and a resident of **San Diego, California**,
10. **Dongwon SEO**, a citizen of the **United States of America**, having a mailing address located at **5775 Morehouse Drive, San Diego, California, 92121-1714**, and a resident of **San Diego, California**,
11. **Xilin LIU**, a citizen of the **People's Republic of China**, having a mailing address located at **5775 Morehouse Drive, San Diego, California, 92121-1714**, and a resident of **San Diego, California**,

have conceived of one or more processes, methods, machines, articles of manufacture, designs, compositions of matter, inventions, discoveries or new or useful improvements relating to a **IMAGE CALIBRATION FOR TIME-INTERLEAVED DIGITAL-TO-ANALOG CONVERTER** (collectively the “**INVENTIONS**”) for which WE have executed and/or may execute one or more patent applications therefor; and

WHEREAS, **Qualcomm Incorporated** (hereinafter “**ASSIGNEE**”), a Delaware corporation, having a place of business at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A., desires to acquire or otherwise obtain the entire right, title, and interest in and to said **INVENTIONS**, including all inventions related thereto or thereof, all patent applications therefor, and all patents that have granted or may be granted hereafter thereon, including but not limited to those identified below.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, WE do hereby acknowledge that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto **ASSIGNEE**, its successors, its legal representatives, and its assigns, the entire right, title, and interest throughout the world in and to said **INVENTIONS**, including all patent applications therefor that may have been filed or may be filed hereafter for said **INVENTIONS** in the United States, including but not limited to U.S. Application No(s). **16/138,499**, filed **September 21, 2018**, Qualcomm Reference No. **175025**, and all provisional applications relating thereto, (and do hereby authorize **ASSIGNEE** and its representative to hereafter add herein such application number(s) and/or filing date(s) when known), and all divisional applications, renewal applications, continuation applications, continuation-in-part applications, and design applications thereof, and all issued patents of the United States which may have granted or may be granted hereafter thereon and all reissues, renewals, reexaminations, and extensions to any of the foregoing and all patents issuing thereon in the United States;

AND WE further do acknowledge and agree that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto **ASSIGNEE**, its successors, its legal representatives, and its assigns, all rights of priority under International Conventions, Treaties, or Agreements, and the entire right, title, and interest throughout the world in said **INVENTIONS**, including all inventions related thereto or thereof, and all patent applications therefor that may have been filed or may be filed hereafter for said **INVENTIONS** in any foreign country, countries, or treaty/union organizations, and all divisional applications, renewal applications, continuation applications, continuation-in-part applications, patent of addition applications, confirmation applications, validation applications, utility model applications, and design applications thereof, and all issued patents which may have granted or may be granted hereafter for said **INVENTIONS** in any country or countries foreign to the United States, and all reissues, renewals, reexaminations, and extensions thereof;

AND WE DO HEREBY authorize and request the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications or registrations, to issue all patents for said INVENTIONS to said ASSIGNEE, its successors, its legal representatives and its assigns, in accordance with the terms of this instrument;

AND WE DO HEREBY sell, assign, transfer, and convey to said ASSIGNEE, its successors, its legal representatives, and its assigns all claims for damages and all remedies arising out of or relating to any violation(s) of any of the rights assigned hereby that have or may have accrued prior to the date of assignment to said ASSIGNEE, or may accrue hereafter, including, but not limited to the right to sue for, seek, obtain, collect, recover, and retain damages and any ongoing or prospective royalties to which WE may be entitled, or that WE may collect for any infringement or from any settlement or agreement related to any of said patents before or after issuance;

AND WE HEREBY covenant and agree that WE will communicate promptly to said ASSIGNEE, its successors, its legal representatives, and its assigns, any facts known to us respecting said INVENTIONS, and will testify in any legal proceeding, sign all lawful papers, execute all applications and certificates, make all rightful declarations and/or oaths, and provide all lawful assistance to said ASSIGNEE, its successors, its legal representatives and its assigns, to obtain and enforce patent protection for said INVENTIONS in all countries;

AND WE HEREBY covenant that WE will not execute any writing or do any act whatsoever conflicting with these presents.

Done at SAN DIEGO, CA, on 1-7-19  
LOCATION DATE

  
Shabin MEHDIZAD TALEIE

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE

Ashok SWAMINATHAN

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE

Sudharsan KANAGARAJ


Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE

Negar RASHIDI

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE

Siyu YANG

AND WE HEREBY covenant that WE will not execute any writing or do any act whatsoever conflicting with these presents.

Done at San Diego, on 1/7/2019   
LOCATION DATE Behnam SEDIGHI

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Honghao JI

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Jaswinder SINGH

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Andrew WEIL

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Dongwon SEO

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Xilin LIU

**ASSIGNMENT**

WHEREAS, WE,

1. **Shahin MEHDIZAD TALEIE**, a citizen of the **United States of America**, having a mailing address located at **5775 Morehouse Drive, San Diego, California, 92121-1714**, and a resident of **San Diego, California**,
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3. **Sudharsan KANAGARAJ**, a citizen of **India**, having a mailing address located at **1201 Parkmoor Ave. #3324, San Jose, California 95126**, and a resident of **San Jose, California**,
4. **Negar RASHIDI**, a citizen of **Iran**, having a mailing address located at **5775 Morehouse Drive, San Diego, California, 92121-1714**, and a resident of **Irvine, California**,
5. **Siyu YANG**, a citizen of the **People's Republic of China**, having a mailing address located at **5775 Morehouse Drive, San Diego, California, 92121-1714**, and a resident of **San Diego, California**,
6. **Behnam SEDIGHI**, a citizen of **Iran**, having a mailing address located at **5775 Morehouse Drive, San Diego, California, 92121-1714**, and a resident of **La Jolla, California**,
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10. **Dongwon SEO**, a citizen of the **United States of America**, having a mailing address located at **5775 Morehouse Drive, San Diego, California, 92121-1714**, and a resident of **San Diego, California**,
11. **Xilin LIU**, a citizen of the **People's Republic of China**, having a mailing address located at **5775 Morehouse Drive, San Diego, California, 92121-1714**, and a resident of **San Diego, California**,

have conceived of one or more processes, methods, machines, articles of manufacture, designs, compositions of matter, inventions, discoveries or new or useful improvements relating to a **IMAGE CALIBRATION FOR TIME-INTERLEAVED DIGITAL-TO-ANALOG CONVERTER** (collectively the "INVENTIONS") for which WE have executed and/or may execute one or more patent applications therefor; and

WHEREAS, **Qualcomm Incorporated** (hereinafter "ASSIGNEE"), a Delaware corporation, having a place of business at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A., desires to acquire or otherwise obtain the entire right, title, and interest in and to said INVENTIONS, including all inventions related thereto or thereof, all patent applications therefor, and all patents that have granted or may be granted hereafter thereon, including but not limited to those identified below.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, WE do hereby acknowledge that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto ASSIGNEE, its successors, its legal representatives, and its assigns, the entire right, title, and interest throughout the world in and to said INVENTIONS, including all patent applications therefor that may have been filed or may be filed hereafter for said INVENTIONS in the United States, including but not limited to U.S. Application No(s). **16/138,499**, filed **September 21, 2018**, Qualcomm Reference No. **175025**, and all provisional applications relating thereto, (and do hereby authorize ASSIGNEE and its representative to hereafter add herein such application number(s) and/or filing date(s) when known), and all divisional applications, renewal applications, continuation applications, continuation-in-part applications, and design applications thereof, and all issued patents of the United States which may have granted or may be granted hereafter thereon and all reissues, renewals, reexaminations, and extensions to any of the foregoing and all patents issuing thereon in the United States;

AND WE further do acknowledge and agree that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto ASSIGNEE, its successors, its legal representatives, and its assigns, all rights of priority under International Conventions, Treaties, or Agreements, and the entire right, title, and interest throughout the world in said INVENTIONS, including all inventions related thereto or thereof, and all patent applications therefor that may have been filed or may be filed hereafter for said INVENTIONS in any foreign country, countries, or treaty/union organizations, and all divisional applications, renewal applications, continuation applications, continuation-in-part applications, patent of addition applications, confirmation applications, validation applications, utility model applications, and design applications thereof, and all issued patents which may have granted or may be granted hereafter for said INVENTIONS in any country or countries foreign to the United States, and all reissues, renewals, reexaminations, and extensions thereof;



AND WE DO HEREBY authorize and request the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications or registrations, to issue all patents for said INVENTIONS to said ASSIGNEE, its successors, its legal representatives and its assigns, in accordance with the terms of this instrument;

AND WE DO HEREBY sell, assign, transfer, and convey to said ASSIGNEE, its successors, its legal representatives, and its assigns all claims for damages and all remedies arising out of or relating to any violation(s) of any of the rights assigned hereby that have or may have accrued prior to the date of assignment to said ASSIGNEE, or may accrue hereafter, including, but not limited to the right to sue for, seek, obtain, collect, recover, and retain damages and any ongoing or prospective royalties to which WE may be entitled, or that WE may collect for any infringement or from any settlement or agreement related to any of said patents before or after issuance;

AND WE HEREBY covenant and agree that WE will communicate promptly to said ASSIGNEE, its successors, its legal representatives, and its assigns, any facts known to us respecting said INVENTIONS, and will testify in any legal proceeding, sign all lawful papers, execute all applications and certificates, make all rightful declarations and/or oaths, and provide all lawful assistance to said ASSIGNEE, its successors, its legal representatives and its assigns, to obtain and enforce patent protection for said INVENTIONS in all countries;

AND WE HEREBY covenant that WE will not execute any writing or do any act whatsoever conflicting with these presents.

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Shahin MEHDIZAD TALEIE

Done at San Diego, on Mar 6, 2019  
LOCATION DATE Ashok SWAMINATHAN

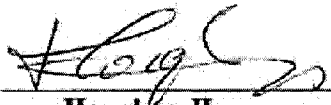
Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Sudharsan KANAGARAJ

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Negar RASHIDI

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Siyu YANG

AND WE HEREBY covenant that WE will not execute any writing or do any act whatsoever conflicting with these presents.

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Behnam SEDIGHI

Done at San Diego, on 03/06/2019   
LOCATION DATE Honghao JI

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Jaswinder SINGH

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Andrew WEIL

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Dongwon SEO

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Xilin LIU

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AND WE further do acknowledge and agree that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto ASSIGNEE, its successors, its legal representatives, and its assigns, all rights of priority under International Conventions, Treaties, or Agreements, and the entire right, title, and interest throughout the world in said INVENTIONS, including all inventions related thereto or thereof, and all patent applications therefor that may have been filed or may be filed hereafter for said INVENTIONS in any foreign country, countries, or treaty/union organizations, and all divisional applications, renewal applications, continuation applications, continuation-in-part applications, patent of addition applications, confirmation applications, validation applications, utility model applications, and design applications thereof, and all issued patents which may have granted or may be granted hereafter for said INVENTIONS in any country or countries foreign to the United States, and all reissues, renewals, reexaminations, and extensions thereof;

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AND WE HEREBY covenant that WE will not execute any writing or do any act whatsoever conflicting with these presents.

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Shahin MEHDIZAD TALEIE

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Ashok SWAMINATHAN

Done at San Jose, on 4/24/2019  
LOCATION DATE   
Sudharsan KANAGARAJ


Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Negar RASHIDI


Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Siyu YANG

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Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE **Behnam SEDIGHI**

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE **Honghao JI**

Done at San Diego, on 1/8/2019  
LOCATION DATE   
**Jaswinder SINGH**

Done at San Diego, on 1/8/19  
LOCATION DATE   
**Andrew WEIL**

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE **Dongwon SEO**

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE **Xilin LIU**

**ASSIGNMENT**

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11. **Xilin LIU**, a citizen of the **People's Republic of China**, having a mailing address located at **5775 Morehouse Drive, San Diego, California, 92121-1714**, and a resident of **San Diego, California**,

have conceived of one or more processes, methods, machines, articles of manufacture, designs, compositions of matter, inventions, discoveries or new or useful improvements relating to a **IMAGE CALIBRATION FOR TIME-INTERLEAVED DIGITAL-TO-ANALOG CONVERTER** (collectively the “**INVENTIONS**”) for which WE have executed and/or may execute one or more patent applications therefor; and

WHEREAS, **Qualcomm Incorporated** (hereinafter “**ASSIGNEE**”), a Delaware corporation, having a place of business at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A., desires to acquire or otherwise obtain the entire right, title, and interest in and to said **INVENTIONS**, including all inventions related thereto or thereof, all patent applications therefor, and all patents that have granted or may be granted hereafter thereon, including but not limited to those identified below.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, WE do hereby acknowledge that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto **ASSIGNEE**, its successors, its legal representatives, and its assigns, the entire right, title, and interest throughout the world in and to said **INVENTIONS**, including all patent applications therefor that may have been filed or may be filed hereafter for said **INVENTIONS** in the United States, including but not limited to U.S. Application No(s). **16/138,499**, filed **September 21, 2018**, Qualcomm Reference No. **175025**, and all provisional applications relating thereto, (and do hereby authorize **ASSIGNEE** and its representative to hereafter add herein such application number(s) and/or filing date(s) when known), and all divisional applications, renewal applications, continuation applications, continuation-in-part applications, and design applications thereof, and all issued patents of the United States which may have granted or may be granted hereafter thereon and all reissues, renewals, reexaminations, and extensions to any of the foregoing and all patents issuing thereon in the United States;

AND WE further do acknowledge and agree that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto **ASSIGNEE**, its successors, its legal representatives, and its assigns, all rights of priority under International Conventions, Treaties, or Agreements, and the entire right, title, and interest throughout the world in said **INVENTIONS**, including all inventions related thereto or thereof, and all patent applications therefor that may have been filed or may be filed hereafter for said **INVENTIONS** in any foreign country, countries, or treaty/union organizations, and all divisional applications, renewal applications, continuation applications, continuation-in-part applications, patent of addition applications, confirmation applications, validation applications, utility model applications, and design applications thereof, and all issued patents which may have granted or may be granted hereafter for said **INVENTIONS** in any country or countries foreign to the United States, and all reissues, renewals, reexaminations, and extensions thereof;



**PATENT**

Qualcomm Ref. No. 175025

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AND WE DO HEREBY authorize and request the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications or registrations, to issue all patents for said INVENTIONS to said ASSIGNEE, its successors, its legal representatives and its assigns, in accordance with the terms of this instrument;

AND WE DO HEREBY sell, assign, transfer, and convey to said ASSIGNEE, its successors, its legal representatives, and its assigns all claims for damages and all remedies arising out of or relating to any violation(s) of any of the rights assigned hereby that have or may have accrued prior to the date of assignment to said ASSIGNEE, or may accrue hereafter, including, but not limited to the right to sue for, seek, obtain, collect, recover, and retain damages and any ongoing or prospective royalties to which WE may be entitled, or that WE may collect for any infringement or from any settlement or agreement related to any of said patents before or after issuance;

AND WE HEREBY covenant and agree that WE will communicate promptly to said ASSIGNEE, its successors, its legal representatives, and its assigns, any facts known to us respecting said INVENTIONS, and will testify in any legal proceeding, sign all lawful papers, execute all applications and certificates, make all rightful declarations and/or oaths, and provide all lawful assistance to said ASSIGNEE, its successors, its legal representatives and its assigns, to obtain and enforce patent protection for said INVENTIONS in all countries;

AND WE HEREBY covenant that WE will not execute any writing or do any act whatsoever conflicting with these presents.

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE

Shahin MEHDIZAD TALEIE

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE

Ashok SWAMINATHAN

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE

Sudharsan KANAGARAJ

Done at Irvine, on 3/6/19  
LOCATION DATE

Negar RASHIDI

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE

Siyu YANG

**PATENT****REEL: 049045 FRAME: 0236**


AND WE HEREBY covenant that WE will not execute any writing or do any act whatsoever conflicting with these presents.

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE **Behnam SEDIGHI**

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE **Honghao JI**

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE **Jaswinder SINGH**

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE **Andrew WEIL**

Done at San Diego, on 3/6/19  
LOCATION DATE   
**Dongwon SEO**

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE **Xilin LIU**

**ASSIGNMENT**

WHEREAS, WE,

1. **Shahin MEHDIZAD TALEIE**, a citizen of the **United States of America**, having a mailing address located at **5775 Morehouse Drive, San Diego, California, 92121-1714**, and a resident of **San Diego, California**,
2. **Ashok SWAMINATHAN**, a citizen of **Canada**, having a mailing address located at **5775 Morehouse Drive, San Diego, California, 92121-1714**, and a resident of **Cardiff, California**,
3. **Sudharsan KANAGARAJ**, a citizen of **India**, having a mailing address located at **1201 Parkmoor Ave. #3324, San Jose, California 95126**, and a resident of **San Jose, California**,
4. **Negar RASHIDI**, a citizen of **Iran**, having a mailing address located at **5775 Morehouse Drive, San Diego, California, 92121-1714**, and a resident of **Irvine, California**,
5. **Siyu YANG**, a citizen of the **People's Republic of China**, having a mailing address located at **5775 Morehouse Drive, San Diego, California, 92121-1714**, and a resident of **San Diego, California**,
6. **Behnam SEDIGHI**, a citizen of **Iran**, having a mailing address located at **5775 Morehouse Drive, San Diego, California, 92121-1714**, and a resident of **La Jolla, California**,
7. **Honghao JI**, a citizen of the **People's Republic of China**, having a mailing address located at **5775 Morehouse Drive, San Diego, California, 92121-1714**, and a resident of **San Diego, California**,
8. **Jaswinder SINGH**, a citizen of the **United States of America**, having a mailing address located at **5775 Morehouse Drive, San Diego, California, 92121-1714**, and a resident of **San Diego, California**,
9. **Andrew WEIL**, a citizen of the **United States of America**, having a mailing address located at **5775 Morehouse Drive, San Diego, California, 92121-1714**, and a resident of **San Diego, California**,
10. **Dongwon SEO**, a citizen of the **United States of America**, having a mailing address located at **5775 Morehouse Drive, San Diego, California, 92121-1714**, and a resident of **San Diego, California**,
11. **Xilin LIU**, a citizen of the **People's Republic of China**, having a mailing address located at **5775 Morehouse Drive, San Diego, California, 92121-1714**, and a resident of **San Diego, California**,

have conceived of one or more processes, methods, machines, articles of manufacture, designs, compositions of matter, inventions, discoveries or new or useful improvements relating to a **IMAGE CALIBRATION FOR TIME-INTERLEAVED DIGITAL-TO-ANALOG CONVERTER** (collectively the "INVENTIONS") for which WE have executed and/or may execute one or more patent applications therefor; and

WHEREAS, **Qualcomm Incorporated** (hereinafter "ASSIGNEE"), a Delaware corporation, having a place of business at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A., desires to acquire or otherwise obtain the entire right, title, and interest in and to said INVENTIONS, including all inventions related thereto or thereof, all patent applications therefor, and all patents that have granted or may be granted hereafter thereon, including but not limited to those identified below.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, WE do hereby acknowledge that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto ASSIGNEE, its successors, its legal representatives, and its assigns, the entire right, title, and interest throughout the world in and to said INVENTIONS, including all patent applications therefor that may have been filed or may be filed hereafter for said INVENTIONS in the United States, including but not limited to U.S. Application No(s). **16/138,499**, filed **September 21, 2018**, Qualcomm Reference No. **175025**, and all provisional applications relating thereto, (and do hereby authorize ASSIGNEE and its representative to hereafter add herein such application number(s) and/or filing date(s) when known), and all divisional applications, renewal applications, continuation applications, continuation-in-part applications, and design applications thereof, and all issued patents of the United States which may have granted or may be granted hereafter thereon and all reissues, renewals, reexaminations, and extensions to any of the foregoing and all patents issuing thereon in the United States;

AND WE further do acknowledge and agree that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto ASSIGNEE, its successors, its legal representatives, and its assigns, all rights of priority under International Conventions, Treaties, or Agreements, and the entire right, title, and interest throughout the world in said INVENTIONS, including all inventions related thereto or thereof, and all patent applications therefor that may have been filed or may be filed hereafter for said INVENTIONS in any foreign country, countries, or treaty/union organizations, and all divisional applications, renewal applications, continuation applications, continuation-in-part applications, patent of addition applications, confirmation applications, validation applications, utility model applications, and design applications thereof, and all issued patents which may have granted or may be granted hereafter for said INVENTIONS in any country or countries foreign to the United States, and all reissues, renewals, reexaminations, and extensions thereof;

AND WE DO HEREBY authorize and request the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications or registrations, to issue all patents for said INVENTIONS to said ASSIGNEE, its successors, its legal representatives and its assigns, in accordance with the terms of this instrument;

AND WE DO HEREBY sell, assign, transfer, and convey to said ASSIGNEE, its successors, its legal representatives, and its assigns all claims for damages and all remedies arising out of or relating to any violation(s) of any of the rights assigned hereby that have or may have accrued prior to the date of assignment to said ASSIGNEE, or may accrue hereafter, including, but not limited to the right to sue for, seek, obtain, collect, recover, and retain damages and any ongoing or prospective royalties to which WE may be entitled, or that WE may collect for any infringement or from any settlement or agreement related to any of said patents before or after issuance;

AND WE HEREBY covenant and agree that WE will communicate promptly to said ASSIGNEE, its successors, its legal representatives, and its assigns, any facts known to us respecting said INVENTIONS, and will testify in any legal proceeding, sign all lawful papers, execute all applications and certificates, make all rightful declarations and/or oaths, and provide all lawful assistance to said ASSIGNEE, its successors, its legal representatives and its assigns, to obtain and enforce patent protection for said INVENTIONS in all countries;

AND WE HEREBY covenant that WE will not execute any writing or do any act whatsoever conflicting with these presents.

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Shahin MEHDIZAD TALEIE

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Ashok SWAMINATHAN

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Sudharsan KANAGARAJ

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE Negar RASHIDI

Done at 5775 Morehouse Dr., on 1/7/2019  
LOCATION DATE Siyu YANG

AND WE HEREBY covenant that WE will not execute any writing or do any act whatsoever conflicting with these presents.

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE **Behnam SEDIGHI**

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE **Honghao JI**

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE **Jaswinder SINGH**

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE **Andrew WEIL**

Done at \_\_\_\_\_, on \_\_\_\_\_  
LOCATION DATE **Dongwon SEO**

Done at San Diego, on 01/07/2019  
LOCATION DATE Xilin LIU  
**Xilin LIU**